(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 23 October 2003 (23.10.2003)

(10) International Publication Number WO 2003/086453 A1

(51) International Patent Classification7: G01N 33/569, A61K 39/145

A61K 39/295

(21) International Application Number:

PCT/IT2002/000231

(22) International Filing Date: 12 April 2002 (12.04.2002)

(25) Filing Language:

Italian

(26) Publication Language:

English

(71) Applicants and

- (72) Inventors: CAPUA, Ilaria [IT/IT]; Via Tiziano Vecellio, 1, I-35027 Noventa Padovana (IT). MARANGON, Stefano [IT/IT]; Viale Garibaldi, 76, 1-30174 Mestre (IT). CATTOLI, Giovanni [IT/IT]; Via Amati, 1, I-35100 Padova (IT).
- (74) Agents: THOMAS, Philip et al.; Eric Potter Clarkson, Park View House, 58 The Ropewalk, Nottingham NG1 5DD (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

(48) Date of publication of this corrected version:

14 April 2005

(15) Information about Corrections:

see PCT Gazette No. 15/2005 of 14 April 2005, Section Π **Previous Correction:**

see PCT Gazette No. 53/2004 of 29 December 2004, Sec-

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PURIFIED SUBFRAGMENT CODIFYING FOR NEUROAMINIDASE, RECOMBINANT NEUROAMINIDASE AND ITS USE IN ZOOPROPHYLAXIS

(57) Abstract: Within the prophylaxis strategies for the control of type A avian influenza caused by viral infection with specific epi-

(57). Abstract: Within the prophylaxis strategies for the control of type A avian influenza caused by viral infection with specific epidemic strain H7N1, a vaccination process is envisaged comprising the preparation of a heterologous vaccine that is administered to an animal population, said vaccine featuring the same subtype of viral haemoagglutinin HA7 and a different subtype of neuroaminidase NA3, and thereafter detecting the viralinfection positiveness by contacting an antigen with at least one genomic sequence that codes for a neuroaminidase NA1 protein with the biological fluids collected from the animals. By subsequently revealing an antigen-antibody reaction by means of a test for detecting positiveness (iIFA, ELISA among others), the vaccinated animals can be discriminated from the other ones. The recombinant antigen is represented by the recombinant glycoprotein neuroaminidase NA1, the genomic sequence of which is carried by a baculovirus and expressed in insect cell.